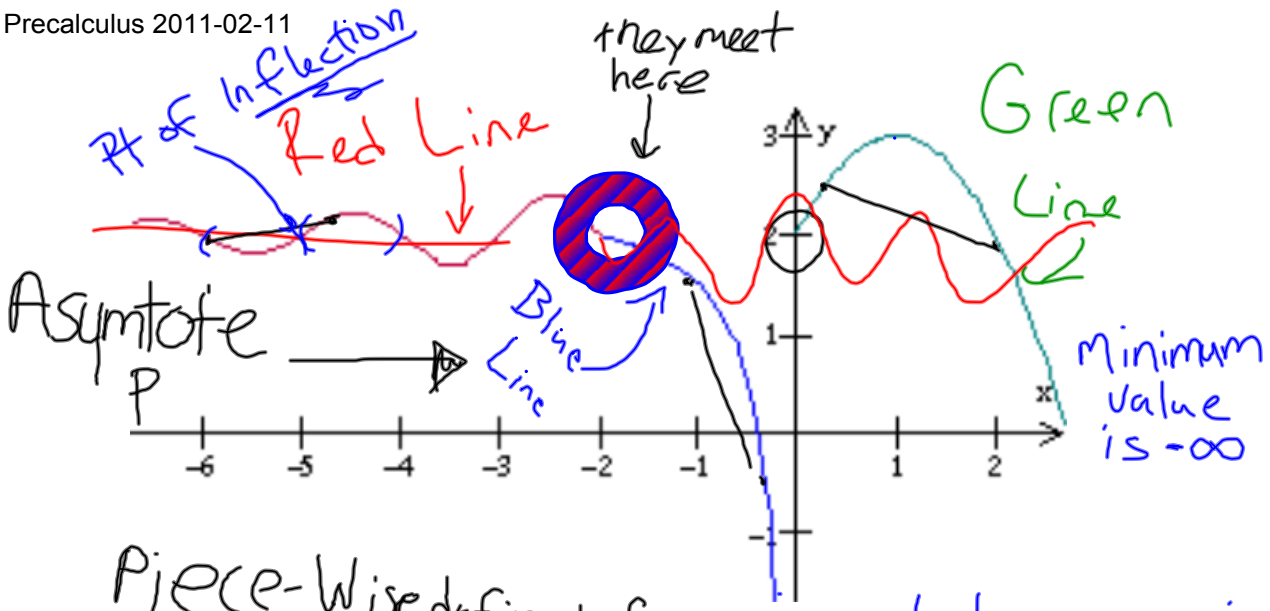


Piece-Wise defined function

It has a maximum value for x values greater than or equal to 0

domain is $(-\infty, \infty)$

Range is $(-\infty, 3]$

COMPLETE

24) ~~47~~ $\left(\sqrt{x^2+3x-6}\right)^2=(x^4-3x^2+2)^2$

$x^2+3x-6=x^8-6x^6+13x^4-12x^2+4$

$0=x^8-6x^6+13x^4-13x^2-3x+10$

x^4-3x^2+2

x^4-3x^2+2

$x^8-3x^6+2x^4$

$-3x^6+9x^4-6x^2$

$+2x^4-6x^2+4$

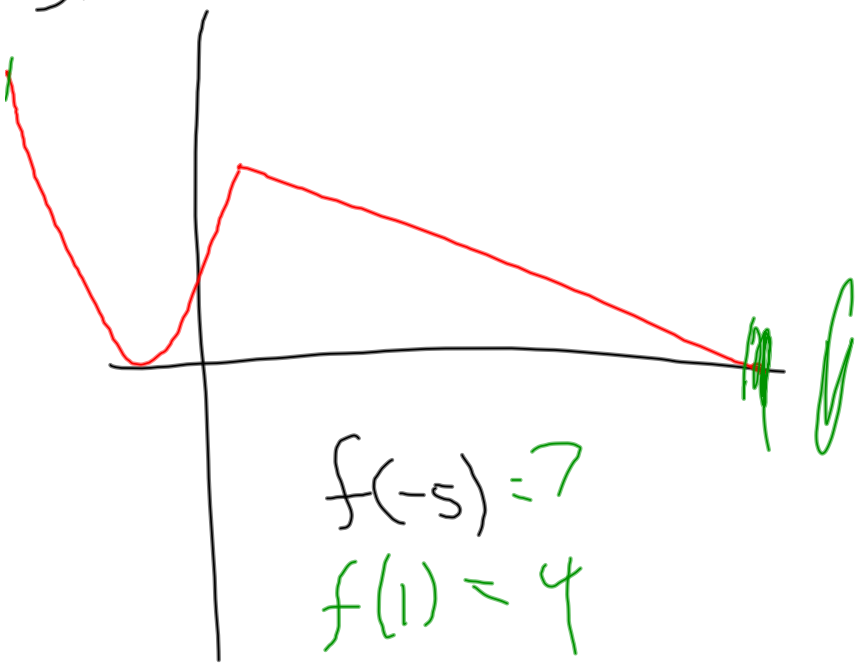
$x^8-6x^6+13x^4-12x^2+4$

43) $(x^2)^5 = x^{10}$

$(x^2+1)^5$

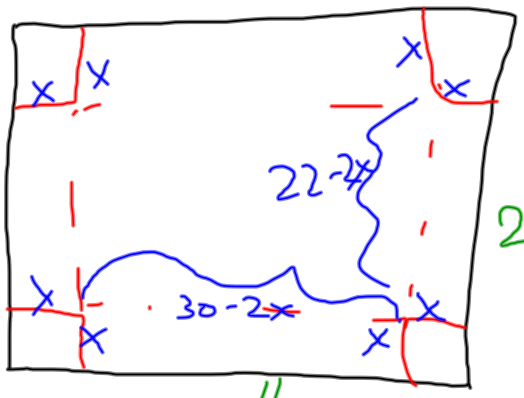
$= x^{10} + \cdots$

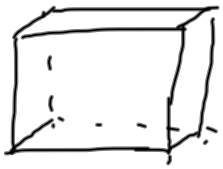
3.2 11



$f(-5) = 7$

$f(1) = 4$





$V = 1000\ in^3$

$= (30-2x)(22-2x)(x)$

$x : (0, 11)$ $V =$

$30-2x \geq 18$

$22-2x \geq 18$

$12 \geq 2x$

$6 \geq x$